MICA User Group Newsletter   November 2014 Issue #11

The Missouri Oral Health Program (MOHP) at DHSS uses MICA tools to examine trends in hospital utilization for dental complaints. Specifically, "disorders of teeth and jaw" within the "digestive system" category in the Emergency Room (ER) MICA has been used extensively by the MOHP. The International Classification of Diseases, Ninth Revision (ICD-9) codes included in the "disorders of teeth and jaw" category have been reviewed by DHSS-affiliated dentists to ensure they represent complaints that specifically exclude injuries and malignancies. Therefore, these dental emergency department (ED) visits can be considered preventable and non-traumatic. Dentists have also confirmed that these complaints could all be treated in a dental office rather than a hospital. Furthermore, EDs generally only provide short-term relief of symptoms for this class of dental problems, which means that an additional visit to a dentist will be necessary for most patients to complete their treatment.[1]

In 2012, 58,309 ED visits for dental complaints were reported among Missouri residents. This represented 2.5% of all ED visits for all complaints. Based on national estimates, an ED visit for a dental complaint costs more than $300; using this estimate, Missouri ED visit costs exceeded $17.5 million in 2012 alone.[1]

When dental complaint ED visits by payment source are reviewed, rates for Medicaid and Self-Pay have increased more rapidly than rates for commercial insurance since 1994. The leading payment source was Medicaid (MO HealthNet) from 2001 until 2006, when it was surpassed by Self-Pay.[2] This is significant because Self-Pay is considered a proxy measure for the uninsured. These data are for the *expected* payment source upon discharge from the ED; therefore, it is unclear whether patients in the Self-Pay category ultimately pay for the care they have received. The Commercial payment sources billed by hospitals are medical insurance companies rather than dental insurance providers.
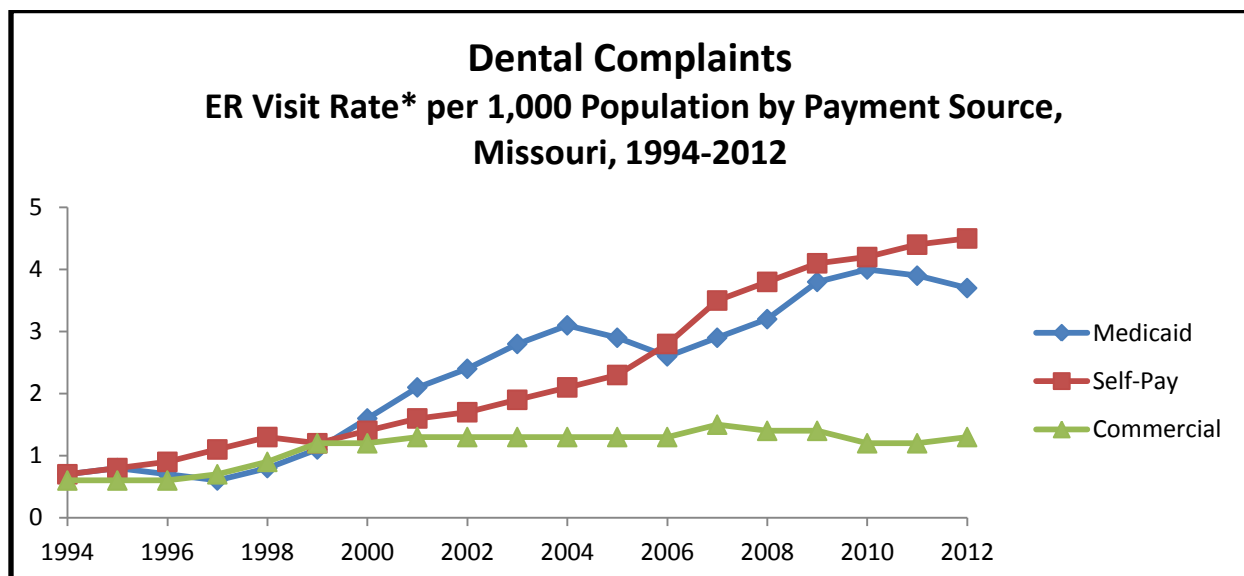
Data Source: ER MICA; *Rates are age-adjusted using the 2000 Standard Population.

MICA was key to demonstrating that, for Missouri residents, the number of ED visits due to preventable, non-traumatic dental complaints has been on the rise over the last several years. This trend has been especially steep for ED visits that had either Medicaid or Self-Pay listed as the expected payment source.

Trend data on ED visits for dental complaints from the ER MICA have been specifically used in oral health reports and are referenced regularly during the ongoing process of developing DHSS' new five-year oral health state plan. For more information on oral health in Missouri, please visit http://www.health.mo.gov/oralhealth.

By: Amy Kelsey, Missouri Oral Health Program (Guest Contributor)

References:
1. The Pew Center on the States. Issue Brief, A Costly Destination: Hospital Care Means States Pay Dearly, February 2012.
2. Missouri Department of Health and Senior Services. Missouri Information for Community Assessment, Emergency Room MICA. http://www.health.mo.gov/MICA.

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New Topic Areas Added to Healthy People 2020 Tracking Website

Two new topic areas, Cancer and Diabetes, have been added to the Healthy People 2020 – Missouri Data Resources website at http://www.health.mo.gov/data/mica/MICA/hpobjectives.html. This site provides links to topic area spreadsheets that detail sources of local Missouri data for the Healthy People 2020 objectives.

For each objective, we have listed a comparable indicator from a Missouri data source, if available, along with the type of rate (1-year, 5-year, etc.) provided by the source and the geographic levels for which rates are available (state, county, city, region, etc.). The last two columns of the spreadsheet include the U.S. baseline and target rates from the Healthy People website. Users can download the table and add additional columns to incorporate their communities' data, which can be easily accessed using the hyperlinks on the Missouri Data Source labels. Additional topic areas will be added as they are completed.

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Summer 2014 MICA Trainings

This summer training season spanned more weeks than in any previous year, with the first courses offered in Joplin on May 13-14 and the last in St. Louis on September 16-17. Fifteen days of training at six different sites were initially planned, with two additional days later added in St. Louis due to demand. Over the course of the summer, 166 people attended the 11 sessions of *Introduction to Profiles and MICA*, 147 people attended the 11 sessions of *Health Data Analysis*, and 34 people attended the 3 sessions of the *Health Data Workshop*.

Public Health Spotlight

Arthur Pashi is a Research Analyst IV within the Office of Epidemiology. He is originally from the Democratic Republic of the Congo (DRC). While living in the DRC, Arthur received a graduate degree in Economics from the Universite de Kinshasa. Kinshasa is the capital city of the DRC. Arthur first came to the United States in 1991, when he moved to Columbia, Missouri, to pursue a Ph.D. in Agricultural and Applied Economics from the University of Missouri.

Arthur started working for the Department of Health and Senior Services (DHSS) in 2001. His first position at DHSS fell within what is now the Bureau of Health Care Analysis and Data Dissemination (BHCADD). In this position, Arthur worked with the Patient Abstract System (PAS), which collects data from hospitals and emergency rooms. These data are eventually loaded into several of the MICA tools. Arthur said that working with the PAS was one of his favorite projects at DHSS because he had the rewarding opportunity to work with many people outside of the Department, especially hospital and Ambulatory Surgical

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The estimated miles driven to Joplin, Poplar Bluff, St. Joseph, Columbia, Kansas City, and St. Louis (twice) total 2,276. Because this was the first summer that we alternated trainers, each person logged a different number of miles. Who traveled the most? Here is the breakdown:

- **Becca** – 1,866 miles
- **Whitney** – 1,410 miles
- **Andy** – 1,252 miles
- **Evan** – 1,212 miles
- **Becky** – 832 miles

Our preliminary analysis of the participant evaluations indicates that attendees liked the use of multiple trainers. What else did attendees enjoy? Common responses included the "hands-on" aspect of the courses, the examples/exercises, the instructors, and the games. Participants won over 1,000 jelly beans. In fact, one of our participants set a record – by guessing the exact number of jelly beans in the jar! We announced this fact, and one member of the class called out, "You should put their picture in your newsletter!" Since she was the winner, we decided to oblige. Here is Karin Sandoval, a graduate student at St. Louis University, with her record-setting jar of jelly beans.

Center (ASC) staff who reported their patient data to comply with state law. This could sometimes be challenging if facilities sent data only because they felt they were being forced to do so. In those cases, the quality of the data was often not that great. Arthur approached reluctant facilities with tact and understanding in order to convince them that sending quality data would benefit them as well as the state. The state could then provide each facility with useful information on its patient base, including the status of and trends in ER visits or hospitalizations by different demographic groups.

Six years ago Arthur transferred to his current position within the Office of Epidemiology, where he supports and analyzes data from the Behavioral Risk Factor Surveillance System (BRFSS) survey of approximately 6,360 adults ages 18 and older. As many of our readers know, the BRFSS is an excellent source of data for indicators related to health conditions (especially chronic diseases), health behaviors, preventive practices, and access to health care. Arthur receives data collected from the BRFSS each year and uses his expertise in SAS programming to transform the raw data into useful information. These results are used "to identify emerging health problems, establish health objectives and track their progress, and develop and evaluate public health policies and programs to address identified problems."[1] While many people are involved in making BRFSS a success, you can thank Arthur for analyzing all of the data and providing the statistics available in the state BRFSS reports each year. (These reports are available at http://www.health.mo.gov/data/brfss/index.php.) He also provides BRFSS and County-Level Study information to universities, state agencies, programs within DHSS, and others. Several of these indicators can be found within some of the Community Data Profiles.

When Arthur is not at work, he enjoys the beautiful neighborhoods in Jefferson City by walking his family's dog and bike riding. He also enjoys reading and gardening in his spare time. When asked to describe something unique about himself, Arthur said to consider him a "man who can engage in conversation with anyone." Throughout his personal, educational, and professional life, Arthur has talked to, worked with, or taught people from more than 100 different countries in multiple languages. Having a likeable personality and the ability to converse with many people has allowed Arthur to build a successful career and make a positive impact on many people.

References
1. Missouri Department of Health and Senior Services. *Behavioral Risk Factor Surveillance System (BRFSS)*. Retrieved October 3, 2014, from http://www.health.mo.gov/data/brfss/index.php.

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Upcoming MICA Trainings

There are no MICA trainings currently scheduled. Any updates will be posted at http://health.mo.gov/data/mica/MICA/healthdatatraining.html. This website also provides descriptions of the training courses as well as the link to our archived *MICA Training Overview Webinar*.

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Data Updates

Several of the Profiles and Data MICAs have been updated since the publication of the last newsletter. They include:

Medicaid Records MICA – through August 2014
Pregnancy MICA – through 2013
TANF (Temporary Assistance for Needy Families) MICA – through August 2014

Assault Injury Profile – through 2012
Chronic Disease Comparisons Profile – through 2012
Death – Leading Causes Profile – through 2012
Self-Inflicted Injury Profile – through 2012
Unintentional Injury Profile – through 2012
Women's Reproductive Health Profile – through 2012

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Recent/Upcoming Events

Over the past few months, the Data Dissemination Unit (DDU) gave several presentations in addition to the summer trainings described earlier in the newsletter. On August 14, Becca provided an overview of the Profiles and MICAs to the members of this year's Program for Dietetic Interns (PDI). (For more information on the PDI program, please visit http://health.mo.gov/living/wellness/nutrition/dieteticinterns/index.php.) On August 27, Andy and Becca gave a similar overview to participants in the Evidence-Based Decision Making course held at Saint Louis University. The course provides a comprehensive approach to program development and evaluation, with the DDU covering a portion of the health statistics section of the course. (Whitney and Evan were also present, but they were attending the course instead of teaching this time.) Finally, on September 8, Andy and Becca presented via webinar to students in a graduate level health assessment course at the University of Missouri – Columbia.

On September 24 and 25, the entire team attended the Missouri Public Health Association Conference at the Stoney Creek Inn in Columbia. We heard a variety of interesting presentations and also hosted a MICA exhibit. Many of the people who stopped by our booth let us know that they receive the newsletter, and we had several new people sign up for the mailing list. We welcome those of you who are receiving the newsletter for the first time. If you are interested in past newsletters, they are archived at http://www.health.mo.gov/data/mica/MICA/newsletters.html.

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Q&A

I recently read an article that lamented the cost of "preventable hospitalizations" in the United States today. What qualifies as a preventable hospitalization? Can I find examples and data related to this topic area within the MICA tools?

There are several ways to access information related to preventable hospitalizations using the MICA suite of tools. In fact, one MICA, the Preventable Hospitalizations MICA, is solely dedicated to tracking conditions that are classified as "preventable." For the purposes of this tool, the Missouri Department of Health and Senior Services (MO DHSS) defines preventable hospitalizations as "diagnoses for which timely and effective outpatient care can help to reduce the risks of hospitalization by either preventing the onset of an illness or condition, controlling an acute episodic illness or condition, or managing a chronic disease or condition..."[1] It should be noted that MO DHSS tracks preventable hospitalizations only for those under the age of 65.

To access the Preventable Hospitalizations MICA, select the Data & Statistics tab from the Department of Health and Senior Services home page at www.health.mo.gov. Then select the MICA link to see all of the available MICA datasets. If Preventable Hospitalizations is chosen from this list, a page specific to this MICA will appear (Figure 1). Definitions and documentation related to this topic can be viewed using the links circled below. Preventable hospitalizations data can be viewed as a table or a map.

Figure 1

The Preventable Hospitalizations table query screen is shown in Figure 2.

Figure 2

As with other hospital-related MICAs, users are able to view data for a variety of different demographic groups as well as by pay source. On Step 6, users can select from a specialized list of diseases and conditions that have been classified as preventable based on the literature referenced above. Dental conditions, diabetes, and vaccine-preventable illnesses are just a few of the 22 diagnoses available for selection. Unlike some other MICAs, the Preventable Hospitalizations MICA does not utilize drill-down hyperlinks to show more specific conditions because all of the preventable diagnoses are available from the main query page. This is not the case for the Inpatient Hospitalization or Emergency Room MICAs, which list only the major categories from the Ninth Revision of the International Classification of Diseases (ICD-9).

Thus, selecting Diagnosis as the row variable in Step 2 and highlighting all of the diagnoses in Step 6 produces the most detailed list of conditions available. The list of all preventable hospitalization diagnoses for Missouri residents is shown in Figure 3.

Figure 3

Preventable Hospitalizations: Residents of Missouri		
	Year	
	2010	
Diagnosis	**Number**	**Rate**
Angina	367	0.6
Asthma	6,662	13.0
Bacterial pneumonia	9,901	17.8
Cellulitis	7,509	14.2
Chronic obstructive pulmonary	7,330	12.0
Congenital syphilis	4	0.0 @
Congestive heart failure	5,674	9.2
Convulsions	1,587	3.1
Dehydration - volume depletion	17,273	31.2
Dental conditions	566	1.1
Diabetes	6,062	11.4
Epilepsy	3,365	6.5
Failure to thrive	166	0.3
Gastroenteritis	2,186	4.1
Hypertension	1,564	2.8
Hypoglycemia	77	0.1
Immunization preventable	50	0.1
Kidney/Urinary infection	4,419	8.2
Nutritional deficiencies	1,673	2.9
Pelvic inflammatory disease	489	1.0
Severe ENT infections	830	1.7
Tuberculosis	46	0.1
Total for Selection	77,800	141.3
All diagnoses	77,800	141.3
Rates Per 10,000 Age Adjustment Uses Year 2000 Standard Population @ Rate considered unreliable, numerator less than 20		
Rotate	Download	

Hospital charges data found in the Hospital Discharges, Charges, and Days of Care MICA can be used in conjunction with the Preventable Hospitalizations MICA to analyze the total costs of these conditions to Missourians. For instance, a query of charges for asthma, which was the fifth leading cause of preventable hospitalizations of Missouri residents in 2010, shows a cost to patients of $102,977,572.00 (Figure 4). Note that these charges reflect the initial charge from the hospital before negotiations with insurance companies or individual patients and not the final dollar amount that a patient is billed.

Figure 4

Hospital Discharges, Charges, and Days of Care: Residents of Missouri	
Diagnosis: Asthma [128.]	
	Year
	2010
Age	Total Charges
Under 15	$18,332,332.00
15 to 24	$4,837,993.00
25 to 44	$19,186,918.00
45 to 64	$33,515,873.00
65 and over	$27,104,456.00
All ages	$102,977,572.00
Rotate	Download

As stated earlier, MO DHSS tracks preventable hospitalizations only for those under the age of 65. If the costs for patients ages 65 and older are subtracted from the total shown in Figure 4, it can be estimated that Missouri residents were initially charged almost $76 million for preventable asthma hospitalizations in 2010. Dividing this amount by the total number of asthma diagnoses from Figure 3 (6,662) reveals an average charge of $11,389 per 2010 asthma hospitalization. This is a case where the use of a combination of MICAs can provide a more comprehensive look at popular topics and issues affecting Missourians.

References
1. Billings J, Zeitel L, Lukomnik J, Carey TS, Blank AE, & Newman L: Impact of socioeconomic status on hospital use In New York City. *Health Affairs* 1993; (Spring): 162-173.

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Practice Exercise

Many of you have asked for additional exercises such as the one below so that you can practice the skills you learned at the MICA trainings. If you would like to check your work, a link to the answer key is provided at the bottom of this section.

After attending the MICA trainings, you go back to your office in Cedar County and begin to explore the 2011 County-Level Study – Health and Preventive Practices Profile. During your exploration, you find that your county has a COPD (chronic obstructive pulmonary disease) diagnosis rate that is significantly higher than the state's rate. You immediately discuss this issue with your supervisor and request funding to combat this problem. Unfortunately, no local funding is currently available. After completing further research, you discover that some neighboring counties also fall within the first quintile, or the top 20 percent of all Missouri counties, for COPD diagnosis rates. You approach these counties about forming a coalition and decide to write a grant to outside funders in order to address this problem in your area. Use the 2011 County-Level Study – Health and Preventive Practices Profile to gather the following data needed in your grant application.

What was the age-adjusted rate of Cedar County residents who had ever been told they had COPD, emphysema, or chronic bronchitis? _____

What neighboring counties also fell within the first quintile for this indicator? (HINT: Remember to use the age-adjusted prevalence.) _____ _____

What were these counties' age-adjusted rates for this indicator? _____ _____

Were these rates significantly higher than the Missouri rate? _____ _____

Create a graphic comparing the COPD rates for these three counties to the state rate.
Which chart type would best compare these rates? _____
Which Profile feature will assist you in creating this graphic? _____

In your grant application, you note that you plan to evaluate your program when new data become available in order to determine whether there has been a significant change in the age-adjusted prevalence of COPD diagnoses. Which County-Level Study Profile statistics could you use to determine significance? _____

Visit http://health.mo.gov/data/mica/MICA/solutions.html to check the solution.

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Farewell

We bid a fond farewell (though she has not gone far) to team member Becky Chitima-Matsiga. Becky worked with BHCADD from October 2012 until July 2014, when she transferred to one of our partner units, the Office of Epidemiology, to work on maternal and child health issues. (She moved one row of cubicles away from us.) During her time in BHCADD, Becky helped with several major projects, including the *African American* and *Hispanic Health Disparities in Missouri* reports and the *Health in Rural Missouri Biennial Report 2012-2013*. Becky also assisted with exhibits and presented sections of the MICA trainings during 2013 and 2014. (Some of our readers who attended the courses during that time may remember her gooey cake.) We wish Becky all the best in her new position!

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Final Thoughts

Some of our summer views …
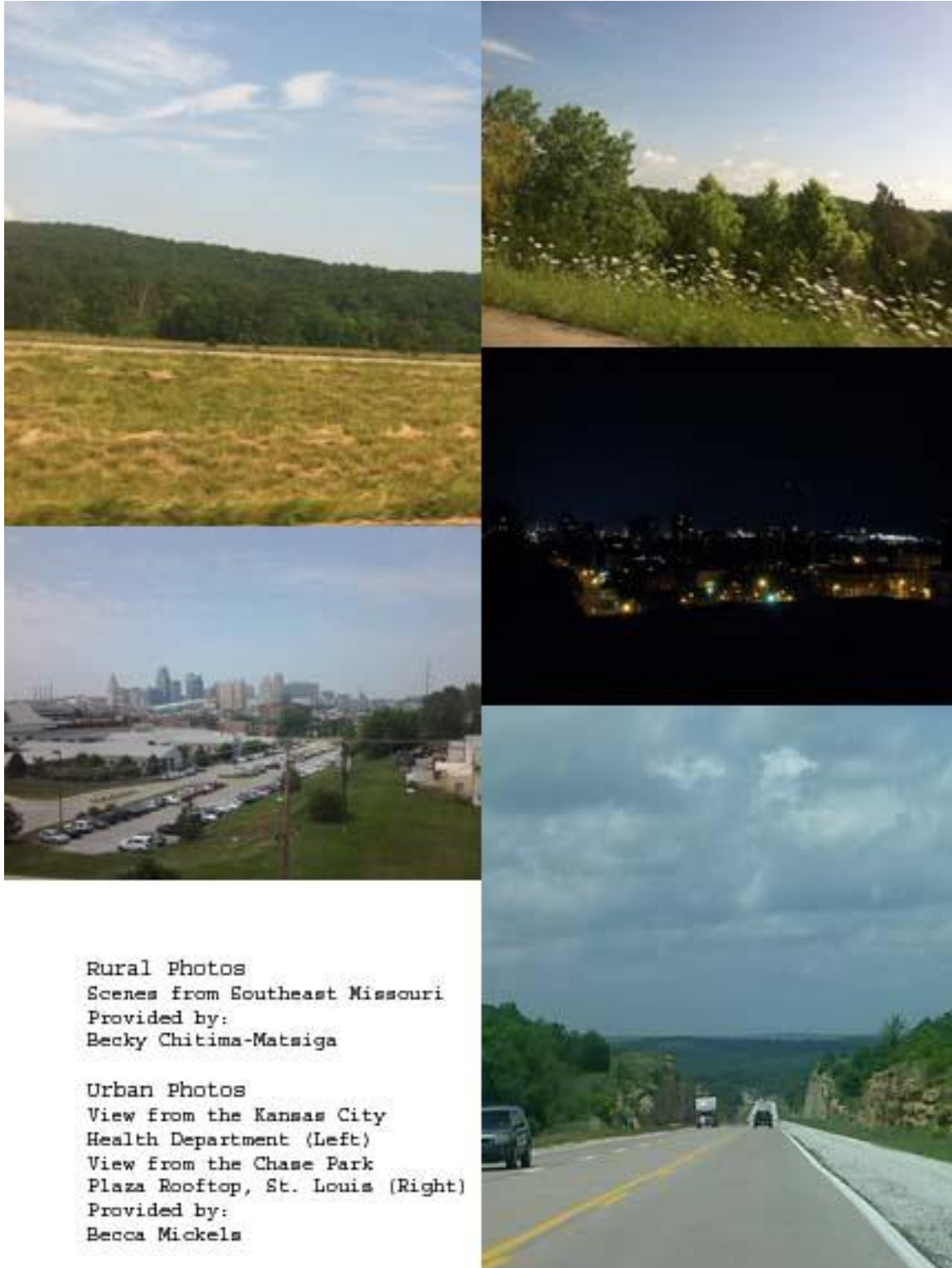
Rural Photos
Scenes from Southeast Missouri
Provided by:
Becky Chitima-Matsiga

Urban Photos
View from the Kansas City
Health Department (Left)
View from the Chase Park
Plaza Rooftop, St. Louis (Right)
Provided by:
Becca Mickels

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About the MICA User Group Newsletter

The MICA User Group Newsletter was created in response to user requests for communication on updates to the MICA system, descriptions of new features, additional practice exercises, announcements of training opportunities, and any other new information about data that might help them perform their jobs more efficiently.

Newsletters will be published on a quarterly basis. If you have ideas for content, please send them to Andrew.Hunter@health.mo.gov or Becca.Mickels@health.mo.gov. We would especially like to feature stories describing your success at completing projects or obtaining grants using the MICA tools as well as interviews with public health professionals about your duties and how you use MICA to accomplish them.

Past issues are available at http://health.mo.gov/data/mica/MICA/newsletters.html.

Contributors:
Andy Hunter, Becca Mickels, Whitney Coffey, and Evan Mobley

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How to Sign Up or Opt Out

If you have enjoyed this newsletter, please feel free to share it with your colleagues and community partners. We encourage them to sign up for the MICA User Group by sending an e-mail to Andrew.Hunter@health.mo.gov or Becca.Mickels@health.mo.gov with the subject line MICA User Group. This will let us know to send newsletters to them directly so they do not miss any information. Also, we may occasionally distribute time-sensitive information on topics such as training opportunities via e-mail if the newsletter is not scheduled for publication prior to a registration deadline. Finally, the MICA User Group list helps us track the types of organizations using the tools, which is one of our performance measures.

If you would like to opt out of the MICA User Group, please send an e-mail with Unsubscribe in the subject line to Becca.Mickels@health.mo.gov. PLEASE NOTE: Depending on your position title, you may still receive other types of e-mail messages from us. For example, we are requested to send training information to all LPHA Administrators, even if they have unsubscribed from the MICA User Group.

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